REMARKS

Claims 1, 3, 4, 6-16, 18-25, 28-41 and 44-63 are currently pending, of which claims 1, 24, and 41 are independent.

Rejection of Claims Under 35 U.S.C. § 103

Claim 24

Claim 24 is directed to an absorbent article for disposition at least partially within the vestibule of a female wearer. The absorbent article comprises:

an absorbent structure sized and configured for insertion at least partially within the vestibule of the female wearer, said absorbent structure comprising in the range of about 5 weight percent to about 15 weight percent superabsorbent material, said absorbent structure having a basis weight in the range of about 150 to about 400 grams per square meter and a density in the range of about 0.05 to about 0.13 grams per cubic centimeter, said absorbent structure having a saturation capacity as determined by a Saturation Capacity and Retention Capacity Test of at least about 15 grams/gram and a retention capacity as determined by said Saturation Capacity and Retention Capacity Test of at least about 3 grams/gram.

The absorbent structure construction recited in claim 24 is directed to a construction that provides a combination of factors to achieve good saturation and retention capacity while still allowing for a good fluid intake rate - something that had not been achieved with prior products. In the past, absorbent articles could deliver either a good fluid intake rate or provide for an acceptable fluid capacity, but not both. For example, as can be seen from the data in Table 12 of the

present application, as the saturation capacity and more particularly the retention capacity increases, the intake time for a first insult and even more so for a second insult gets worse. While the saturation and/or retention capacity of the absorbent structure could be maximized by changing the construction of the absorbent structure, doing so would further undesirably worsen the intake performance.

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being obvious in view of Bewick-Sonntag et al. (U.S. 2003/0191442 A1) ("Bewick") in combination with Dulle (U.S. 3,856,013), Zelazoski et al. (U.S. 5,536,555) and Brandt et al. (U.S. Re. 32,649). Applicants respectfully traverse the rejection. In particular, claim 24 is submitted to be non-obvious in view of and patentable over the references of record in that whether considered alone or in combination the references fail to disclose or suggest an absorbent article having an absorbent structure that is 1) sized and configured for insertion at least partially within the vestibule of the female wearer, 2) comprised of 5 to 15 weight percent superabsorbent material and 3) has the recited basis weight, density, retention capacity and saturation capacity. For example, the superabsorbent material concentration in the recited range provides for improved intake times during use of the absorbent article while still providing the recited saturation and retention capacities. See, for example, codes 8 and 10 of Fig. 12 of the present application.

Functionality

A disagreement appears to have arisen between the Examiner and applicants regarding the relevance of whether the superabsorbent material concentration and performance

characteristics recited in claim 24 (and other claims of the present application) are structural or functional recitations. In particular, the Examiner has repeatedly relied on In re Schreiber, 128 F.3d 1473, 1477-78 (Fed. Cir. 1997) as support for the proposition that while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In response, applicants noted that In re Schreiber was inapplicable in the present case because in Schreiber the asserted functional terms were found to be inherent in the prior art and therefore could not be relied on to distinguish over the prior art. Functional terms are submitted to be entitled to patentable weight where the prior art structure does not function in the claimed manner. [1]

Now, in the final Office action, the Examiner asserts that In re Schreiber is being relied upon solely to indicate that some of the limitations are interpreted as being functional. See page 8. The Examiner otherwise agrees that the cited references do not inherently disclose the superabsorbent concentration and performance characteristics recited in claim 24. Nor is there any assertion in the final Office action that the absorbent structures described in the cited art function in accordance with claim 24 of the present application. Indeed, they do not. Rather, the sole obviousness position set forth

[1] In In re Swinehart (which was cited in In re Schreiber) the language at issue - that the claimed composition was transparent to infrared rays and taken to be functional - specifically rendered the subject claim allowable over prior art compositions that were chemically the same but not transparent to infrared rays.

by the Examiner now appears to based on an asserted optimization.

Respectfully, applicants are unclear at this point why a determination of whether the recited performance characteristics are structural or functional limitations is needed. If the performance characteristics set forth in claim 24 are being given the same patentable weight as the superabsorbent material concentration (which the Examiner admits is a structural recitation), then what is the significance of the Examiner's characterization of the performance characteristics as being functional? The determination clearly does not have any bearing on the Examiner's optimization position because the Examiner is asserting that both the recited superabsorbent material concentration (admittedly structural) and the recited performance characteristics (which the Examiner asserts are functional) are mere optimizations.

For the purpose of clarifying the issues for appeal, applicants respectfully request that the Examiner identify the asserted effect of labeling the recited performance characteristics as functional. Applicants also reiterate their position that such recitations define the structure of the absorbent structure, and not a function.

Optimization

With regard to optimization, the final Office action asserts (with regard to claims 24, 25, 30, 39-31, 54, and 55, not just with regard to claim 24) that differences in test characteristics or parameters such as size, temperature, concentration, density, etc. will not support patentability unless there is evidence indicating such characteristic is

critical. Additionally, the final Office action notes as it has previously that a parameter must be recognized as a result-effective variable before the determination of the optimum or workable ranges of that variable might be characterized as routine experimentation.

Bewick (see paragraph 0114 thereof) disclose a superabsorbent fiber concentration in the range of 25-100 percent, and in a particularly preferred embodiment it is 70 percent. The Examples of Bewick each disclose an absorbent core having a superabsorbent concentration of 50 percent. Thus, Bewick clearly fails to teach a superabsorbent material concentration in the range of about 5 to about 15 percent as recited in claim 24.

Rather, the Office's position is that it would have been obvious to one skilled in the art to modify, and more particularly to optimize, the superabsorbent material concentration of the absorbent of Bewick. More specifically, the final Office action takes the position that optimizing the amount of superabsorbent material would have been known to one of ordinary skill in the art, and in particular that increasing the superabsorbent concentration provides for increased absorbent capacity, while decreasing the superabsorbent concentration increases the rate at which liquid can be absorbed. While increasing superabsorbent material concentration does increase absorbent capacity, applicants respectfully request evidence from the Examiner that one skilled in the art knows that decreasing the superabsorbent concentration increases the rate at which liquid can be absorbed.

Bewick clearly teaches using a substantially greater superabsorbent material concentration (i.e., greater than the

5-15 percent recited in claim 24). As admitted by the Examiner, increasing the superabsorbent concentration increases the absorbent capacity of the absorbent core. Thus, it is also true, then, that decreasing the superabsorbent concentration will decrease the absorbent capacity of the absorbent core. However, Bewick specifically teaches the desirability of a high capacity absorbent core. See, e.g., paragraphs [0114 and 0115]. Where a proposed modification of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 123 USPQ 349 (CCPA 1959); MPEP 2143.01(VI). Lowering the superabsorbent concentration specified by Bewick for its high capacity absorbent core to the range called out in claim 24 would certainly reduce the absorbent capacity of the core, which violates the principles taught by Bewick. For these reasons alone, one skilled in the art would not be motivated to modify Bewick to have the superabsorbent concentration recited in claim 24.

Also, the only data provided by Bewick regarding the absorbency provided by the superabsorbent material is the data in Fig. 23 for Examples 2-5 wherein the HGW Capacity is identified as 7.3 grams. This data was obtained at a superabsorbent material concentration of 50 percent. There is no disclosure by Bewick, however, as to what happens to this capacity as the superabsorbent material concentration goes down to 25 percent, let alone below 25 percent or even in the range of 5-15 percent as recited in claim 24. Thus, there is no reason that one skilled in the art would believe, based on the disclosure of Bewick, that the saturation capacity and/or the retention capacity would remain in the range recited in claim

24 if the superabsorbent material concentration was reduced from 50 percent down to about 5 to about 15 percent as recited in claim 24. Indeed, based on the express teachings of Bewick not to go below 25 percent, one skilled in the art would not be motivated to do so.

It also would not have been obvious to one skilled in the art to modify the absorbent core of Bewick to have the recited saturation capacity and the recited retention capacity, particularly while lowering the superabsorbent concentration to that recited in claim 24. In this regard, the Office cites Dulle (column 2, lines 37-59) for allegedly teaching that "maximizing saturation capacity of an absorbent article aids in preventing the article from exceeding that capacity, beyond which it can not absorb more fluid;" and Brandt (column 1, lines 38-55) for allegedly teaching that "maximizing the total fluid capacity of an absorbent article is desirable."

Applicants submit that the cited reference passages do not support the Office's position regarding optimization. Dulle is directed to the macroscopic or overall geometry of and construction techniques for making foam tampons. The cited passage (column 2, lines 37-59) reads as follows:

> Catamenial tampons are subject to four distinct kinds of failure: bypass, partitioning, compression, and exceeding saturation capacity. Bypass failure occurs when the menses travels the length of the vagina without contacting the tampon, i.e., the tampon fails to intercept the flowing menses. This generally occurs because the tampon does not fill the cross section of the vagina. Partitioning failure occurs when the menses flow rate past a particular area of the tampon is greater than the absorption rate into the tampon in that area. Thus, although some of the menses is absorbed, that flow which is greater than the absorption rate into the tampon proceeds past the tampon and out the introitus. This partitioning occurs many times because the tampon surface is blocked by mucus secretions, clotted

> blood, or endometrial debris. Compressive failure occurs when the user inadvertently brings pressure to bear on a tampon which has absorbed menses, and this pressure is great enough to "squeeze" the menses from the tampon. Exceeding the saturated capacity occurs when the tampon has absorbed all the fluid it can, and for every drop added thereafter, another drop must leave the tampon.

Applicants submit that nothing in that passage, which teaches the various manners in which tampons fail, suggests that saturation capacity be maximized. Nor does Dulle teach anywhere therein that the foam materials used to make the tampons disclosed by Dulle are intended to "maximize" saturation capacity.

Although Brandt is more germane to the present invention than Dulle in that Brandt is directed to the composition of an absorbent layer for use, e.g., in diapers, sanitary napkins, etc., the cited passage (column 1, lines 38-55) reads as follows:

> Frequently hydrogel-forming absorbent materials comprise polymers of polymerizable unsaturated carboxylic acids or derivatives thereof, such as acrylic acid and/or alkali metal and alkyl acrylates. These polymers are rendered water-insoluble by cross-linking the carboxyl group-containing polymer chains using conventional cross-linking agents such as di- or poly-functional monomer materials. The degree of cross-linking in hydrogel and hydrogel-forming materials not only determines their water-solubility but is also an important factor in establishing two other characteristics of fluid absorbing hydrogels, i.e., absorbent capacity and gel strength. Absorbent capacity of "gel volume" is a measure of the amount of water or body fluid which a given amount of hydrogel-forming material will absorb. Gel strength relates to the tendency [of] *or* the hydrogel formed from such material to deform or "flow" under an applied stress.

While this passage teaches the desirability of providing a superabsorbent material having an increased absorbent capacity, there is no teaching whatsoever by Brandt that it is desirable to maximize the retention capacity of an absorbent structure made from this superabsorbent material.

Most importantly, the absorbent article recited in claim 24 (and the other claims of the present application, for that matter), and more particularly the absorbent structure therein, is not constructed to maximize each of the various "test vectors" as the Office asserts would be obvious. Rather, as discussed previously, the criticality of the combination of the recited superabsorbent material concentration, saturation capacity and retention capacity that this combination provides good (but not maximized) saturation and retention capacity while still allowing for a good fluid intake rate - something that had not been achieved with prior products. While the saturation and/or retention capacity of the absorbent structure could be maximized as the Office seems to suggest is the goal of one skilled in the art based on Dulle and Brandt, doing so would further undesirably worsen the intake performance. Thus, the construction of the absorbent structure recited in claim 24 does not "maximize" saturation capacity and retention capacity but rather balances it with the need for improved intake performance.

Intake performance is clearly not a concern set forth in Bewick. Accordingly, one skilled in the art would not have been motivated by Dulle and Brandt to modify Bewick to sacrifice saturation capacity and/or retention capacity for the sake of improved intake performance.

To this end, the Office still relies on Zelazoski as teaching the desirability of minimizing intake and rewet

properties. However, Zelazoski clearly render this teaching only with respect to body-side liner material and not to absorbent structures, particularly absorbent structures that contain superabsorbent material. See, e.g., column 3, lines 30-45. There is clearly no teaching or even a suggestion for minimizing the intake and rewet performance of an absorbent structure, and in particular an absorbent structure such as that recited in claim 24 as comprising superabsorbent material. The final Office action (at page 10 thereof) now takes the position that Zelazoski discloses the desirability of minimizing the intake and rewet properties of absorbent articles generally. There is no evidence, either cited in the final Office action or in Zelazoski itself, to permit such an extrapolation of the teachings of Zelazoski.

Rather, the teachings of Zelazoski are directed solely to the particular construction of the bodyside liner and its effect on intake and rewet performance. At best, one skilled in the art reading Zelazoski would be motivated to modify Bewick to use the bodyside liner of Zeloski in place of the liner used by Bewick. However, the structure and characteristics recited in claim 24 are directed to that of an absorbent structure, and not to a bodyside liner.

Moreover, applicants again note that the absorbent structure recited in claim 24 is not intended to "minimize" intake performance. See, e.g., the Table of Fig. 12 again in which the intake times for the control samples (1-5) were, on the whole, much less than the intake times for the absorbent structures (6-11) according to the present invention.

One skilled in the art would not be motivated by Zelazoski to sacrifice intake and rewet performance to assure better saturation and retention capacity performance.

For all of the above reasons, Applicants respectfully submit that claim 24 is non-obvious in view of and patentable over the cited references.

Claims 25, 28-40 and new claims 60-62 depend directly or indirectly from claim 24 and are submitted to be patentable over the references of record for the same reasons as claim 24.

Claim 41

Claim 41 also stands also rejected under 35 U.S.C. § 103(a) as being obvious in view of Bewick-Sonntag et al. (U.S. 2003/0191442 A1) ("Bewick") in combination with Dulle (U.S. 3,856,013), Zelazoski et al. (U.S. 5,536,555) and Brandt et al. (U.S. Re. 32,649). Applicants respectfully traverse the rejection. In particular, claim 41 is submitted to be non-obvious in view of and patentable over the references of record in that whether considered alone or in combination the references fail to disclose or suggest an absorbent article having an absorbent structure that is 1) sized and configured for insertion at least partially within the vestibule of the female wearer, 2) comprises in the range of about 5 weight percent to about 35 weight percent superabsorbent material, 3) has a basis weight in the range of about 150 to about 400 grams per square meter and a density in the range of about 0.05 to about 0.13 grams per cubic centimeter, and 4) has an intake time for a first insult of said absorbent structure as determined by an Intake and Rewet Test of no more than about 30 seconds.

Bewick fails to expressly or inherently disclose an intake time for a first insult of said absorbent structure as determined by an Intake and Rewet Test of no more than about 30 seconds. Moreover, there is no suggestion found anywhere in

Bewick (nor has the Examiner asserted otherwise) for modifying the absorbent core thereof to have the recited intake time.

Rather, the Office's position with respect to claim 41 (as best understood by applicants) is that it would have been obvious in view of the teachings of Zelazoski to minimize intake time.

However, Zelazoski is specifically directed to a bodyside liner material that has an improved intake time and rewet. See, e.g., column 8, lines 17-20 at which Zelazoski disclose the basis weight of the liner being about 14 to about 75 gsm (compare this to the basis weight of the absorbent structure recited in claim 41 as being at least twice that of Zelazoski). Thus, the teachings of Zelazoski are limited entirely to the construction and operation of the topsheet. There is no teaching or suggestion of the relationship between an absorbent structure such as that of Bewick and intake time (or intake rate) of the absorbent structure. Rather, at the most one skilled in the art may be motivated by Zelazoski to modify the topsheet of Bewick in the manner disclosed by Zelazoski However, such a teaching does not amount to a teaching that intake time is a result-effective variable for an absorbent core and would not motivate one skilled in the art to modify the absorbent core of Bewick to provide the intake time recited in claim 41.

Moreover, applicants note that the absorbent structure recited in claim 24 is not intended to "minimize" intake performance. See, e.g., the Table of Fig. 12 again in which the intake times for the control samples (1-5) were, on the whole, much less than the intake times for the absorbent structures (6-11) according to the present invention.

For these reasons, claim 41 is submitted to be non-obvious in view of and patentable over the cited references.

Claims 44-55 and new claim 53 depend directly or indirectly from claim 41 and are submitted to be patentable over the references of record for the same reasons as claim 41

Claim 1

Claim 1 stands rejected under 35 U.S.C. § 103(a) as being obvious in view of Bewick, Dulle, Brandt, and Zelazoski as applied to claims 24, 25, 28-33, 36-41, 44-48, and 51-55, and further in view of Bewick-Sontag et al. (U.S. 5,836,929) ("Bewick '929"), on which the final Office action relies for disclosure of an absorbent article having an absorbent core made from a blend of hydrophilic fibers and superabsorbent material as recited in claim 1.

Claim 1 is submitted to be non-obvious in view of and patentable over the references of record, and in particular US 2003/091442 (Bewick-Sonntag et al., referenced further herein as Bewick) in combination with U.S. Patent No. 5,836,929 (Bewick-Sonntag et al., referenced further herein as the '929 reference), in that whether considered alone or in combination the references fail to disclose or otherwise suggest an absorbent article comprised of an absorbent structure that is sized and configured for insertion at least partially within the vestibule of the female wearer, is constructed at least in part of hydrophilic fibers and superabsorbent material, with the superabsorbent material being in the recited concentration and having the recited gel stiffness index, and wherein the absorbent structure has the recited combination of saturation capacity, retention capacity and intake time.

Bewick discloses an absorbent device having a topsheet for contacting hydrous body tissues. In particular, as illustrated in Figs. 4 and 5, the absorbent device is an interlabial pad 20 composed of three key elements: 1) a highly adaptable absorbent structure able to macroscopically adapt to a unique anatomical shape, 2) a microscopically structured absorbent core/topsheet, and 3) a robust application/insertion design feature. See paragraphs [0016 - 0019]. With particular reference paragraphs [0110 - 0122], the absorbent core 44 is positioned between a topsheet 42 and back sheet 38 and provides the means for absorbing exudates such as menses.

According to Bewick, the absorbent core 44 in one embodiment is a fibrous batt, such as of rayon or a rayon/cotton blend. Paragraph [0113]. In other embodiments, the absorbent core 44 can comprise fibrous superabsorbent material in a concentration in the range of 25% to 100% and in particularly preferred embodiments a concentration above 70%. Paragraph [0114]. In one particular example, the superabsorbent fiber is FIBERDRI type 1162 superabsorbent fibers from Camelot Technologies Ltd. Of Alberta, Canada. Paragraphs [0119 and 0120]. In the working examples 2-5 described by Bewick, the absorbent core 44 comprised 50% of the FIBERDRI type 1162 superabsorbent fibers.

At paragraphs [0309 and 0310], Bewick describes an absorbent capacity test that is comparable to the retention capacity portion of the Saturation Capacity and Retention Capacity Test recited in claim 1 and described in the present application. Figure 23 of Bewick indicates that the absorbent capacity of the working Examples 2-5 of Bewick have an absorbent capacity of 7.3 grams/gram, which appears to meet the recited retention capacity of claim 1 of at least 3 grams/gram.

The superabsorbent concentration for these Examples was 50 percent. See paragraph [0164].

Bewick fails, however, to expressly disclose the combination of a saturation capacity as determined by a Saturation Capacity and Retention Capacity Test of at least about 15 grams/gram, a retention capacity as determined by said Saturation Capacity and Retention Capacity Test of at least about 3 grams/gram, and an intake time for a first insult of said absorbent structure as determined by an Intake and Rewet Test of no more than about 30 seconds. In particular, Bewick fail to disclose, expressly or inherently, the recited saturation capacity and intake time. Moreover, there is no suggestion found anywhere in Bewick for modifying the absorbent core thereof to have the recited combination of retention capacity, saturation capacity and intake time. The '929 reference also fails to show or suggest such features (nor does the Office action contend otherwise).

Rather, the final Office action asserts that the benefits of optimizing saturation capacity, retention capacity, intake time, and rewet (with respect to dependent claims 22 and 23) would have been known, such that those are result-effective variables. Accordingly, reference is made to the rejection under Bewick, Dulle, Brandt, and Zelazoski to support the rejection. Because the Office relies on essentially the same logic to support the rejection as addressed above in connection with claim 24, Applicants traverse the rejection of these claims for the same reasons set forth above.

For example, Zelazoski as previously noted is specifically directed to a bodyside liner material that has an improved intake time and rewet. Thus, the teachings of Zelazoski are limited entirely to the construction and operation of the

liner. There is no teaching or suggestion of the relationship between an absorbent structure such as that of Bewick and intake time (or intake rate) of the absorbent structure. Rather, at the most one skilled in the art may be motivated by Zelazoski to modify the topsheet of Bewick in the manner disclosed by Zelazoski However, such a teaching does not amount to a teaching that intake time is a result-effective variable for an absorbent core and would not motivate one skilled in the art to modify the absorbent core of Bewick to provide the intake time recited in claim 41.

Moreover, applicants note that the absorbent structure recited in claim 1 is not intended to "minimize" intake performance. See, e.g., the Table of Fig. 12 again in which the intake times for the control samples (1-5) were, on the whole, much less than the intake times for the absorbent structures (6-11) according to the present invention. Nor is the absorbent structure recited in claim 1 intended to "maximize" saturation capacity and/or retention capacity as discussed above.

For these reasons, claim 1 is submitted to be non-obvious in view of and patentable over the references of record.

Claims 3, 4, 6-16, 18-23 and new claims 56-59 depend directly or indirectly from claim 1 and are submitted to be patentable over the cited references for the same reasons as claim 1.

Conclusion

In view of the above, applicant respectfully requests favorable consideration and allowance of claims 1, 3, 4, 6-16, 18-25, 28-41 and 44-63 as now presented.

The Commissioner is hereby authorized to charge any fee deficiency in connection with this Response to Non-Final Office Action to Deposit Account Number 19-1345 in the name of Senniger Powers.

Respectfully submitted,

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